Ceramic Pressure Sensor Module

Description

XDB103 series ceramic pressure sensor module features a 96% Al_2O_3 ceramic material and works based on the piezoresistive principle. The signal conditioning is done by a small PCB, which is mounted directly to the sensor, offering 0.5-4.5V, ratio-metric voltage signal (customized is available). With excellent long-term stability and minimal temperature drift, it incorporates offset and span correction for temperature changes. The module is cost-effective, easy to mount, and suitable for measuring pressure in aggressive media due to its good chemical resistance.

Features

- Solid ceramic sensitive diaphragm
- Small size, convenient to install and operate
- Complete surge voltage protection function
- Excellent corrosion and abrasion resistance
- Provide OEM, flexible customization

Typical applications

- Intelligent IoT, Energy and water treatment systems
- Medical, agricultural machinery and testing equipment
- Hydraulic, pneumatic control systems,refrigeration equipment

Important notice

Since the sensor is sensitive to humidity, to ensure optimal performance, here are some recommendations for mounting:

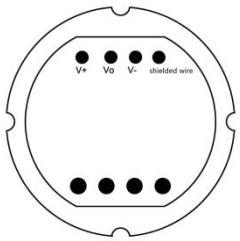
- **Pre-mounting:** Place the sensor in a drying oven at 85°C for at least 30 minutes to remove any moisture.
- **During mounting:** Ensure that the circumstance humidity is kept below 50% during the mounting process.
- **Post-mounting:** Take appropriate sealing measures to protect the sensor from moisture.
- Please note that the module is a calibrated product, and errors may occur during the installation process. Before use, it is essential to minimize errors caused by external factors such as the installation structure and other accessories as much as possible.

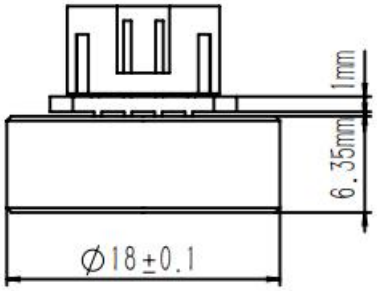
Parameters

Pressure range	-1~400 bar	Long-term stability	≤±0.2% FS/year
Accuracy	±1% FS, Others on request	Response time	≤4ms
Input voltage	DC 5V,12V, 3.3V,9-36V	Overload pressure	150% FS
Output signal	4~20mA, 0.5~4.5V, Others on request	Burst pressure	200-300% FS
Operating temperature	-40 ~ 105 ℃	Cycle life	500,000 times
Compensation temperature	-20 ~ 80 ℃	Sensor material	96% Al_2O_3
Operating current	≤3mA	Pressure medium	Media compatible with ceramic materials
Temperature drift (zero&sensitivity)	≤±0.03%FS/ ℃	Weight	≈0.02 kg
Insulation resistance	>100 MΩ at 500V		

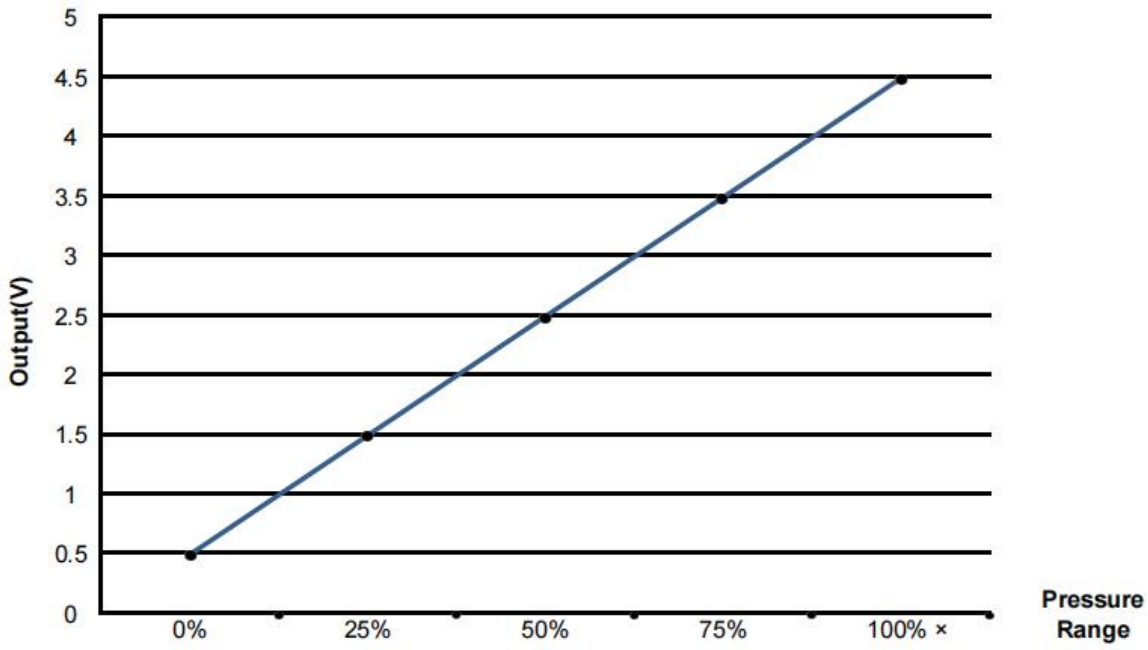
Dimensions(mm) & electrical connection

Pin	Function	Color
V+	Supply +	Red
V0	GND	Black
V-	Output	Yellow





Output Curve (5±0.25V)



How to order

E.g. **XDB103- 10B - 01 - 0 - B - c - 01**

1	Pressure range	10B
	M(Mpa) B(Bar) P(Psi) X(Others on request)	
2	Pressure type	01
	01(Gauge) 02(Absolute)	
3	Supply voltage	0
	0(5VDC) 1(12VDC) 2(9~36(24)VDC) 3(3.3VDC) X(Others on request)	
4	Output signal	B
	A(4-20mA) B(0-5V) C(0.5-4.5V) D(0-10V) E(0.4-2.4V) F(1-5V) G(I^2C) X(Others on request)	
5	Accuracy	c
	c(1.0% FS) d(1.5% FS) X(Others on request)	
6	Direct lead wire/C3/C4	01
	01(lead wire 100mm) 02(C3) 03(C4) X(Others on request)	

Notes:

1) Please connect the pressure transducers to the opposite connection for different electric connector.

If the pressure transducers come with cable, please refer to the right color.

2) If you have other requirements, please contact us and make notes in the order.

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